

PROJECT TITLE : MATERIAL DEVELOPMENT
PERIOD COVERED : JUNE 24 - AUGUST 27 1981
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1. NEW FILTRATION MATERIAL

1.1 Eastman 2.5/40.000 Y Tow

Objective

2.5/40.000 Y tow evaluation. Possible replacement of the existing 3.4/46.000 I tow by this item.

Summary

For an RTD of 375 mm WG an economy of 15% of cellulose acetate can be made by using this 2.5/40.000 Y tow. MLF-CH cigarettes were made with these filters and were compared with MLF-CH standard cigarettes. The trials were repeated twice (1). From the smoke delivery point of view, no difference was noted between trial and control cigarettes. The different panels gave contradictory opinions.

Follow-up

A mail-out test will be organized for the end of October. Based on the results of this mail-out test and the various former taste evaluations, a decision will be made concerning the introduction of this tow on the MLF-CH brand.

1.2 Eastman 8.0/64.000 Y and 8.0/80.000 R

Objective

Search for a new filtration material in order to attain the objective of project COCONUT (386).

Summary

Based on the results given by the cigarette construction model for project COCONUT, Eastman was asked to supply us with a 8.0 denier per filament tow with a high total denier. The two qualities mentioned above were proposed. The filter rods were produced by Eastman and sent to us for the trials.

Characteristics of the Filter Rods

The characteristics of the filter rods made by Eastman are given in the table below:

Tow Item	8.0/64.000 Y	8.0/80.000 R
Rod Length "mm"	108	108
Rod Ø "mm"	7.83 ± 0.03	7.83 ± 0.02
Filter Plug Wrap Permeability "K"	320	320
Filter Rod RTD "mm WG"	318 ± 9	334 ± 9
Plasticizer Type	Estrobond-B	Estrobond-B
Plasticizer Content "%"	7	8
Filter Rod Weight "mg"	1.043 ± 0.01	1.339 ± 0.02

Description of Samples and Results

MLF-CH cigarettes with 40% and 45% dilution were produced with these filters. The total RTD of the cigarettes achieved with these filters were respectively 75 and 70 mm WG. The results of the smoke analyses have not yet been received.

Follow-up

As soon as results of the smoke analyses are available, a special report will be written.

2. TIPPING PAPER

Ecusta Micro-mechanically perforated Tipping Paper

Objective

Possible replacement of the existing tipping paper on MLF-CH and MLK-CH by micro-mechanically perforated tipping paper.

Summary

The first two trials run on MLK-CH to substitute the existing 23/60 tipping paper were negative: the dilution levels were low compared to the standard. We asked Ecusta to increase the permeability of air of the tipping paper. We recently received three samples of micro-mechanically perforated tipping paper at different permeability levels.

Characteristics of the Tipping Papers

The physical characteristics of the tipping papers received are given in the table below.

	Ecusta TOD 9791	Ecusta TOD 9792	Ecusta TOD 9793
Length of Bobbin "mm"	48	48	48
Substance "g/m ² "	37.8	32.2	32.9
Thickness "mm"	0.050	0.040	0.043
Permeability of air "l/h 4 cm ² "	60.0	79.2	81.6
Perforation Position "mm"	12.0	15.0	13.5

Follow-up

The only sample that can be taken into account for this trial is TOD-9791. Because of the perforation position, trials cannot be carried out with the other tipping papers.

3. STUDY: COMPO

Objective

Determination of the influence of different cigarette paper parameters on the static burning time, puff count and smoke yield assuming constant tobacco characteristics.

Summary

In order to elucidate the influence of the cigarette paper parameters (permeability, fiber content, filler content and additive type) on the smoke yield, twenty five types of different cigarette papers were prepared in cooperation with De Mauduit. MLF-CH non-diluted cigarettes were made and smoked in order to determine the puff counts, static burning time and the smoke deliveries.

Follow-up

The results obtained are being studied and a special report will be issued.

4. ASSISTANCE TO PROJECTS

4.1. BUBBLE ULTRA

Based on the results given by the cigarette construction model, a 2.5/40.000 Y tow was proposed as a filtration material with a 70% dilution level, in order to comply with the objectives of this project.

4.2. ROSA

108 mm rods were made with 2.5/40.000 Y, 3.3/44.000 Y and 3.4/46.000 I tows. For each type of filter 3%, 5%, 7% and 10% of plasticizer were applied. Two different types of plasticizer were used at each application level: TEGDA and triacetin. The RTD level was kept constant for each type of filter rod.

References

1. Erkohen-E. Monthly Report (June 1981)

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